THE INFLUENCE ON RURAL COMMUNITIES OF INTERURBAN TRANSPORTATION SYSTEMS

VOLUME II
TRANSPORTATION AND COMMUNITY DEVELOPMENT: A MANUAL FOR SMALL COMMUNITIES
CHAPTER VII: Glossary and Bibliography

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The set of planning guides contained in Volume II would be of interest to the community representatives. The guides are designed for the layperson and are written in non-technical language. The purpose of the manual is to promote a more informed participation in the national, state, and regional decision-making process as it relates to transportation, and to provide the basis for initiating and continuing comprehensive local planning for small urban places (cities and towns with a population of 25,000 or less).

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PREFACE

BACKGROUND

This document is one in a series developed as an outgrowth of research sponsored by the U. S. Department of Transportation, Office of University Research, through the Council for Advanced Transportation Studies, The University of Texas at Austin. The topic of this research project, "The Influence on Rural Communities of Interurban Transportation Systems," was one of five conducted under the general title, "Transportation to Fulfill Human Needs in a Rural/Urban Environment." The overall objective of this project was to investigate the nature of interurban transportation influence on small "rural" communities (below 25,000 in population) and to assess the relationship between changes in the interurban system and the potential for growth and development of small communities.

The project consisted of four basic stages:

(1) a review and analysis of transportation impact studies leading to the identification and investigation of areas deemed important to rural communities and intercity transportation systems,

(2) an investigation of high probability areas of impact to ascertain data availability and appropriateness of various methodological concepts in studying transportation impacts on rural communities,

(3) a detailed case study of selected rural communities in terms of their response, real and perceived, to changes in their intercity transportation systems and accessibility, and

(4) the development and field testing of a set of transportation planning guides designed for use by the layperson in the rural community and the regional planner.

The research is documented in two volumes:

Volume I: The Influence on Rural Communities of Interurban Transportation Systems, and

Volume II: Transportation and Community Development: A Manual for Small Communities.

The first volume is the description of the study process and the findings of the various research phases during the project. This document would be of interest to professional planners in regional governments having small, rural communities within their jurisdiction. The report may aid in facilitating their interactions with representatives of smaller cities and enhance their appreciation of the uniqueness of those areas as reflected in their needs and issues.

The set of planning guides contained in Volume II would be of interest to the community representatives. The guides are designed for the layperson and are written in non-technical language. The purpose of the manual is twofold:

(1) to promote a more informed participation in the national state, and regional decision-making process as it relates to transportation and

(2) to provide the basis for initiating and continuing comprehensive local planning for small urban places (cities and towns with a population of 25,000 or less).

The MANUAL is divided into an executive summary and seven chapters, each individually bound and designed for use separately or in conjunction with others. The seven chapters are:

Chapter I. The Transportation Planning Process,

Chapter II. Transportation Impact,

Chapter III. Goals and Objectives,

Chapter IV. Community Inventory,

Chapter V. Development of Alternatives and Preliminary Assessment,

Chapter VI. Evaluation, and

Chapter VII. Glossary and Bibliography.

The Glossary and Bibliography contain a wide variety of information pertinent to Transportation Planning and Management. This section is included as an additional aid to those who are interested in the problems associated with planning and management for transportation programs. It is not intended to be exhaustive in scope, but rather is intended to provide general assistance concerning the literature and terminology associated with transportation planning and management.

The Glossary provides definitions for terms included under the following categories: General Transportation Planning Terms; Specialized Transportation Terms; Operations, Management, and Economics Terms; Administrative and Fiscal Terms; and the Alphabet Soup, a short listing of those acronyms most frequently used in the literature concerning transportation programs.

The Bibliography contains a selective list of works which should be useful to those with an interest in transportation. The Bibliography is comprised of the following categories: General Background; General Transportation Planning; Specialized Transportation Planning; Evaluation; and Planning for Small Cities. Many of the references cited include National Technical Information Service (NTIS) numbers. The Council for Advanced Transportation Studies' Regional Transportation Information System can provide assistance in the acquisition of these and many of the other works cited in the Bibliography.

CHAPTER VII. GLOSSARY AND BIBLIOGRAPHY OF SELECTED TRANSPORTATION PLANNING TERMS

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GLOSSARY OF TERMS

GENERAL TRANSPORTATION PLANNING TERMS

A-95 - Office of Management and Budget (OMB) Circular No. A-95 furnishes guidance to Federal agencies for cooperation with State and local governments in the evaluation, review, and coordination of Federal assistance programs and projects.

ACCESS-TIME - The time required to walk or drive to and from the transit stops plus a waiting time based on frequency of transit service. For auto trips it is the time required to walk to and from parking spaces.

ACCESSIBILITY - Accessibility is a concept used in transportation planning to describe the ease with which an individual has an opportunity to participate in an activity. The more accessible the activity is, the fewer travel barriers and less travel friction need be overcome to reach the activity.

ACTION PLAN - A document which describes the organization to be utilized and the processes to be followed in the development of Federal-aid projects from initial system planning through design, as described in Volume 7, Chapter 7, Section 1, of the Federal-Aid Highway Program Manual.

AIR QUALITY CONSISTENCY DETERMINATION - Air Quality Agency and the Transportation Planning Agency evaluates the transportation plan and state implementation plan to insure they are consistent.

ALGORITHM- A set of rules used in mathematical computations.

ANNUAL ELEMENT - A list of transportation improvement projects proposed for implementation during the first program year in the urban planning process.

ANNUAL REPORT - A report issued annually by the Transportation Planning Study Group in the Metropolitan Planning Study to the general public containing nontechnical language indicating the study program and future work to be undertaken.

APPROPRIATE LOCAL OFFICIALS - (1) In urban areas under 50,000 population, the principal elected officials of general purpose local governments. (2) In urbanized areas, the principal elected officials of general purpose local governments acting through the Metropolitan Planning Organizations.

ARTERIAL - Class of street serving major movement of traffic not served by freeways. In traffic assignment, a link connecting two arterials nodes is classified arterial.

ATTITUDINAL SURVEY - A survey of users of transportation facilities to try to identify psychological factors associated with patronage of transportation services.

ATTRACTION - The pull or attracting power of a zone. Attractions in a zone can be considered synonymous with trip destinations in that zone.

ATTRIBUTABLE FUNDS - That part of the urban system apportionment that is earmarked for expenditure in areas over 200 thousand population.

AUTO FREE ZONE (AFZ) - Area in which normal automobile traffic is prohibited. Vehicular traffic is restricted to public transit, emergency vehicles, taxicabs, and delivery of goods or combination thereof.

AVAILABILITY - The degree to which a transportation mode is present or capable of being used. Different standars of availability apply to different groups.

AVERAGE DAILY TRAFFIC (ADT) - The average number of vehicles passing a specified point during a 24 hour period. Some examples are noted below: Annual Average Daily Traffic (ADDT)-Denotes the daily traffic that is averaged over one calendar year. Annual Average Weekday Traffic (AAWDT) -Denotes that the specified period includes only weekdays, Monday through Friday.

BASE YEAR - The year selected to which the major portion of data is related. It is usually taken as the year of the survey.

BASELINE DATA - Date collected on the dependent variables before the initiation of a project. Also see Dependent Variables.

CALIBRATION - The procedure used to adjust travel models to simulate base year travel.

CAPACITY - As used in traffic assignment, the number of vehicles per hour which can be served on a link at the speed indicated. The capacity may be directional or total two-day. It may also be indicated as a 24-hour traffic volume which would produce capacity conditions in the peak hour. As used in transit capacity is the total number of passengers which can be carried by a vehicle or a fleet.

CAPTIVE RIDERS - Riders who due to circumstances have no other means of tran-transportation.

CENSUS TRACT - Small areas into which large cities and adjacent areas are divided for the purpose of providing comparable small-area population and housing census tabulations.

CENTRAL BUSINESS DISTRICT (CBD) - Usually the downtown retail trade area of a city, or generally, an area of very high land valuation, traffic flow, and concentration of retail business offices, theatres, hotels, and service businesses.

CENTROID - That point in a zone which is used to load all trips to and from that zone. It is set as the center of trip ends in a zone.

CERTIFICATION OF THE PLANNING PROCESS - Transportation planning in urbanized areas being conducted as specified in Volume 4, Chapter 4, Section 2 of the Federal-Aid Highway Program Manual.

CITIZEN ADVISORY COMMITTEE - An organized group of local people supplying their ideas and input to a particular transportation study.

COLLECTOR - DISTRIBUTOR STREET - A street which collects and distributes traffic between higher type arterial highways and less important streets or directly to traffic destinations, with intersections at grade, and with the functions of traffic movement and access to abutting properties equally important. In transit, a collector system is one which provides service over part of a trip, the rest being provided by line haul service.

COMPREHENSIVE PLANNING - It is a planning process which requires inclusion of land use, transportation, water and swere, education, health, and other elements.

COOPERATIVE AGREEMENT - The establishment of a formal procedure supported by a written memorandum of understanding between the State highway departments and the governing bodies of the local communities for carrying out the transportation planning process.

CORDON LINE - An imaginary line enclosing a study area, along which external interviews are conducted.

DESIGNATED AGENCY - The Metropolitan Planning Organization selected by the Governor to receive the Section 104(f) of Title 23 U.S.C. Planning Funds for carrying on Section 134 Planning Process.

DESIRE LINE - A straight line connecting the origin and destination of a trip. A desire line map is made up of many such desire lines, the width or density of which represents the volume of trips moving between the origin and destination.

DESTINATION - Terminal end of a trip or the zone in which a trip terminates.

DIRECT IMPACTS - Direct impacts are generally confined to the changes in land use, natural environment, and human activities that are the result of construction and/or operation changes in the transportation network.

DISTRIBUTION - The process by which the movement of trips between zones is estimated from trip ends. Given a zone of interest, this step determines the proportion of all trips originating in this zone which is destined to each zone in the study area.

DIVERSION - The process of allotting trips among two or more possible routes on the basis of measurable parameters.

DWELLING UNIT - A room or group of rooms, occupied or intended for occupacy as separate living quarters, by a family or other group of persons living together or by a person living alone.

ENVIRONMENTAL IMPACT STATEMENT (EIS) - EIS is a document, required for major government projects by the National Environmental Policy Act (NEPA), which describes the anticipated social, economic, land use, legal, and institutional effects of a proposed project.

EXPANSION FACTOR - The factor applied to a sample of trip data to expand it to represent all travel within a study area.

FEDERAL AID HIGHWAY SYSTEM - Those programs which include the apportionment of Federal funds to the states, with a requirement for state matching funds, for the Interstate, primary, secondary, and urban systems, and the urban extensions of the primary and secondary systems. Other federally supported programs, such as Forest Highways, Highway Beautification, etc., are not included under this term.

FEDERAL REGIONAL COUNCIL - Created by executive order of the President in each Standard Federal Region in which 10 Federal agencies are represented to provide a forum for consideration and evaluation of problems impacting on Federal programs.

FEDERAL-AID PRIMARY SYSTEM - (A - System) - Consists of an adequate system of connected main highways, selected by each State through its State highway department.

FEDERAL-AID SECONDARY SYSTEM - (B - System) - Selected by the State highway departments and the appropriate local road officals in cooperation with each other. Secondary Systems include such selections as: farm-to-market roads, rural mail routes, public school bus routes, local rural roads, access roads to airports, county roads, and township roads.

FEDERAL-AID SYSTEMS - The four Federal Aid Systems are the primary system, the urban system, the secondary system, and the Interstate System.

FEDERAL-AID URBAN BOUNDARY - The boundaries of the area which encompass the entire urban place as designated by the U. S. Bureau of Census plus that adjacent area as agreed upon by local officials in cooperation with the State.

FEDERAL-AID URBAN SYSTEM - (D - System) - Designated by the State highway department. The system is located to serve the major centers of activity, and high traffic volume arterial and collector routes, including access roads to airports and other transportation terminals.

FORECAST ZONE - A subdivision of a study area used for purposes of forecasting trip ends and perhaps for trip distribution.

FORECASTING - The process of determining the future values of land use, socio-economic, and trip making variables within the study area.

FUTURE DEMAND - Consider demand in a system over a finite period of time assuming given incomes, prices and system configurations; future demand implies an assessment of the satisfied, latent, and induced types of demand as they will occur in the future. For comparison see Satisfied Demand, Latent Demand, Induced Demand, and Transportation Demand.

GRAVITY MODEL - A mathematical model of trip distribution based on the premise that trips produced in any given area will distribute themselves in accordance with the accessibility of other areas and the opportunities they offer.

GROWTH FACTOR - A ratio of future trip ends divided by present trip ends.

HOME-BASED TRIP - A trip with one end at the residence.

HPR FUNDS - Highway Planning and Research funds are the 1½ percent monies allocated to States by Section 307(c) of Title 23 U.S.C.

HP&R WORK PROGRAM - Highway Planning and Research Work Program; State and local program which indicates the planning activities that will be undertaken during the proceeding year using funds authorized by Title 23, U.S.C., Sections 104(f) and 307(c). Also see HPR Funds.

IMPACT - The consequences of an action or activity that have influence on something else, i.e., the environment, people, economic activities, the political system, etc.

INDIRECT IMPACTS - Induced changes in economic activities, land use, and human behavior which are the result of new or altered transportation related activities.

INSTITUTIONAL BARRIERS - Obstacles to cooperative efforts between agencies or between agencies and public transit, such as problems of franchise requirements, labor problems, insurance rating systems, vehicle registration and safety requirements, and restrictions on the use of school buses.

INTEGRATED GRANT ADMINISTRATION - A Government Services Administration (GSA) program to facilitate the delivery of jointly funded Federal assistance to State and local governments, in accordance with GSA Federal Management Circular (FMC) 74-7 and DOT Order 4600.8A.

INTENSIVE STUDY AREA - In the planning for metropolitan areas the intensive study area is that portion of metropolitan area which is now urbanized or expected to be urbanized at some future deinfed date. Current planning is based on projections for the year 1990.

INTERMODAL INTEGRATION PROGRAM - UMTA program to improve transportation in an urban area by integrating the entire transit system along institutional operational, and physical lines.

INTERMODAL PLANNING GROUPS - (PG's) A Federal committee which was established by DOT Order 1130.2. which has been established in each of the 10 standard Federal regions of the Nation, composed principally of the field planning representatives of the Federal Highway Administration, the Urban Mass Transportation Administration, and the Federal Aviation Administrations.

INTERVENING OPPORTUNITIES MODEL - A mathematical trip distribution model based on probability theory. It distributes trips from a zone to each other zone in proportion to the probability that the trips have not found a prior destination in zones ranked closer to the zone of origin.

INTERZONAL TRAVEL TIME - Travel time between zones consisting of the terminal times of each end plus the driving time.

INTERZONAL TRIP - A trip with its origin and destination in different zones.

INTRAZONAL TIME - The average travel time for trips beginning and ending in the same zone, including terminal time.

INTRAZONAL TRIP - A trip with both its origin and destination in the same zone.

K FACTOR - Normally, an adjustment factor applied to a gravity mode.

L FACTOR - The probability function of the intervening opportunities model.

LAND USE - The purpose for which land or the structure on the land is being used.

LINK - A section of highway or transit route identified by the nodes at its ends. It may be one-way or two-way.

LOCAL STREET - A street intended only to provide access to abutting properties. In traffic assignment, any link having a centroid as one node.

LONG-RANGE ELEMENT - The portion of the transportation plan that describes the improvements needed for the next 20 years. The long-range plan is a goal oriented plan that expresses the long range transportation.

LOOP NETWORK - A single closed transit line or set of lines, circular or oblong in form, with transfer stations at points of tangency between lines.

MAJOR ACTIVITY CENTER (MAC) - Distinct geographical areas characterized by small size, large transient populations, and heavy traffic volumes and densities, e.g., CBD, major air terminals, large universities, large shopping centers, industrial parks, sports arenas.

MAJOR STREET OR HIGHWAY - An arterial highway primarily for traffic movement and secondarily for providing direct access to abutting properties, with intersections at grade, and with traffic control and geometric design features used to expedite safe traffic movement.

MEASURES OF OPERATING COSTS - For the measurement of operating costs, there are four major unit cost measures that can be used (either separately or together) in determining cost effectiveness: 1) cost per vehicle hour, 2) cost per vehicle mile, 3) cost per passenger trip, and 4) cost per passenger mile. See also Vehicle Hour, Vehicle Mile, Passenger Trip, and Passenger Mile.

METROPOLITAN PLANNING ORGANIZATIONS (MPO) - The organization designated by the Governor responsible, together with the State, for comprehensive transportation planning according to 23 U.S.C. 134, 23 U.S.C. 104(f)(3), and 49 U.S.C. 1602(a)(2) and (c)(1)1, 49 U.S.C. 1603(a), and 49 U.S.C. 1604(g)(1) and (1). This organization shall be the forum for cooperative decisionmaking by principal elected officials of general local government.

MINIMUM PATH - That route of travel between two points which requires the least accumulation of time or distance - or other parameter - to traverse.

MOBILITY - Access to a transportation service; Mobility represents the supply function of transportation services facing an individual (or group) when he uses transportation services. If two people have access to the same transportation services at the same price, then they have equal mobility.

MODE OF TRAVEL - The form of transportation used to accomplish a particular trip purpose (walking, personal automobile, etc.)

MODEL - An analytical tool used by transportation planners to assist in making forecasts of land use, economic, socioeconomic, and travel characteristics, as in gravity model, interactance model, regional growth model, traffic model. Also see Simulation.

MODAL SPLIT - The process of separating total person trips into modes of travel.

NATIONAL TRANSPORTATION STUDY - A biennial nationwide report that summarizes the status of all transportation needs through the Nation.

NETWORK - A system of links describing a transportation system for analysis.

ORIGIN - The beginning end of a trip or the zone in which a trip begins.

OVERALL PROGRAM DESIGN (OPD) - A multi-year work program statement which is required from applicants for HUD's "701" program for Planning Assistance.

PASSENGER MILES - The sum of the trip distances traveled by all passengers.

PASSENGER TRIPS - The number of one-way trips by persons using the system. Each passenger counts as an individual trip even if there is group boarding and alighting at common points.

PERSON TRIP - A trip made by a person by any mode for any purpose; distinct from vehicle trip.

PL FUNDS - Planning assistance funds to MPO's designated by Governors.

POLICY COMMITTEE - An organized body of local elected officials that are responsible for the general guidance and administrative coordination of the study.

PROCEDURE GUIDELINES - Instructions issued by FHWA (Volume 7, Chapter 7 Section 1 of the Federal-Aid Highway Programs Manual) to implement Section 109 (h) Title 23 U.S. Code. These guidelines require the states to produce "Action Plans" which describes the procedures for integrating economic, social, and environmental considerations into highway decisions.

PRODUCTIONS - The number of home based trip ends in the zone of residence. For all nonhome based trips, productions are synonymous with origins. Also see Origins.

PROPERTY - The general term given to a transit system.

PROSPECTUS - A document which outlines the scope of the planning program, procedures to be used in carrying out the elements of the planning process, a breakdown of the functional responsibilities of all participating agencies, and a list of products expected to be delivered by the end of the program year in terms of major milestones.

PUBLIC TRANSPORTATION - Transportation provided for a group of people by some agency or business. The transportation may be for hire (taxi, rental car), supplied gratis (school bus, public vehicle), or partially rented (bus, train, plane).

R FUNDS - Planning and Research Funds authorized by Title 23 U.S.C. 304(c)(2).

REGION - A broad geographic area that is connected politically, economically, and socially, e.g., a trip from Oakland to San Francisco would be regional, a trip from Sacramento to San Francisco, interregional.

RESEARCH, DEVELOPMENT, AND DEMONSTRATIONS PROGRAM (R&D) - UMTA program to stimulate technological, institutional, and operational improvements in public transportation.

RETROFIT - To retrofit is to install some feature in an existing piece of equipment.

ROUTE - (1) The course followed by a scheduled transit vehicle as a part of a Transit System. Definition by Parson, Brickerhoff, Quade and Douglas. (2) The combination of street and Freeway sections connecting an Origin and destination. Definition by FHWA. (3) A defined path consisting of one of more courses which an aircraft traverses in ahorizontal plane over the surface of the earth.

SAMPLE - The individual occurrence that represents a set or group of occurrences, usually trips.

SECTION 134 - Title 23 U. S. Code (Federal-Aid Highway Act of 1962) in which the Congress declared transportation planning be based on a continuing comprehensive, and cooperative process.

SEQUENCE ZONE - To distribute trips or to assign traffic to a network, it is necessary that all zones be numbered in an unbroken sequence beginning with zone 1.

SHORT RANGE TRANSPORTATION PROGRAM - A staged multimodel program of capital and operational projects consistent with the long-range transportation plan, and leading to achievement of the short-range transportation objectives of a metropolitan area.

SIMULATION - To reproduce synthetically, e.g., to simulate a trip distribution. Means the approximation of actual behavior by mathematical models. Some models have been developed giving detailed estimates of demand on a county-wide basis or for specific routes and sectors. Separate models are available for fixed-route and for demand-responsive systems. Also see Model.

SOFTWARE - The documentation and manuals of service operation such as: dispatchers guidelines, training and orientation manuals, computer programs, etc.

STANDARD METROPOLITAN STATISTICAL AREA (SMSA) - An SMSA is a county or groups of counties containing at least one city (or twin cities) of 50,000 or more population, plus any adjacent counties which are mtropolitan in character and economically and socially integrated with the central county or counties. (In New England, towns, and cities rather than counties are the units used in defining SMSA's).

STUDY AREA - The area delimited for the purpose of data collection by a transportation study. This area contains the central city and surroundings, which will become urbanized in 20 to 30 years and is the area for which forecasts of travel are made.

STUDY AREA BOUNDARY - The area that is expected to take on urban characteristic in the next 20 to 30 years by the end of the planning period.

SURVEY ZONE - A subdividison of the study area which is used during the data collection phase of a study. It may be, but need not be, identical to forecasting zone or traffic assignment zones. Normally the numbers are not sequential.

SYSTEM PLANNING - Transportation planning for the total area.

TECHNICAL ADVISORY COMMITTEE - Composed of representatives of each of the agencies on the policy committee and others who could provide assistance or data during the preparation of the plan.

THREE C PLANNING PROCESS - Comprehensive, continuing and cooperatively transportation planning process.

TRAFFIC SIMULATION - Models are used to approximate "real" transportation networks. Traffic simulation is the assignment of trips to different links in the transportation network based on the estimated demand for travel between the two destination.

TRANSIT DEVELOPMENT PROGRAM (TDP) - A plan for the development of transit services in non-urbanized area. See also TIP.

TRANSPORTATION IMPROVEMENT PROGRAM (TIP) - A staged multi-year program of transportation improvement projects including an annual element. A tip is required as part of the certification process in urbanized areas.

TRANSPORTATION PLANNING PROCESS - Within the context of overall planning for the future of a community, transportation planning covers mobility. It is the orderly procedure of collecting data on the existing system (including all rights-of-way, vehicles and equipment, and signalization), determining where improvements are necessary, and suggesting a method and time tables for obtaining the necessary changes.

TRAVEL FORECASTING - The process of taking current travel patterns on a given network and projecting the travel patterns for some future time period. This process is usually based on an estimation of future land use in the study area.

TRIP - A one-direction movement which begins at the origin at the start time, ends at the destination at the arrival time, and is conducted for a specific purpose.

TRIP DISTRIBUTION - The process by which the movement of trips between zones is estimated from trip ends (which are the places that people go to, i.g., home, office, shopping, park, etc.) Given a particular zone, this step determines the proportion of all trips originating in this zone which are designated to each zone in the study area.

TRIP GENERATION - A general term describing the analysis and application of the relationships which exist between the tripmakers, the urban area, and the tripmaking. It relates to the number of trip ends in any part of the urban area.

TRIP PRIORITIES - Those trips which must be served, either because of the funding sources or by policy decision, before any optional trip purposes can be served. It is essential to identify these trip priorities because they represent a set of trips that must be considered fixed.

TRIP RATES - This is a measure of travel demand. It is usually expressed in terms of the number of trips per person per day.

TRIP TABLE - A table showing trips between zones - either directly or total two-way. The trips may be separated by mode, by purpose, by time period, by vehicle type of other classification.

UNIFIED WORK PROGRAM (UWP) - A document covering all work activities of the State and local agencies involved with the continuing transportation planning process in urbanized areas.

URBAN AREA - An urban place as designated by the Bureau of the Census having a population of 5,000 or more and not within any urbanized area.

URBAN AREA BOUNDARY - The boundaries of the area that encompass the entire urban place as designated by the U.S. Bureau of Census plus that adjacent area as agreed upon by local officials in cooperation with the State.

URBAN PLACE - All incorporated and unincorporated places of 2,500 or more.

URBAN TRANSPORTATION PLAN - A transportation plan for a city of 2,500 or more. (See Transportation Planning Process) The plan covers proposed facilities and operational policies for all relevant modes of transportation.

URBANIZED AREA - An urbanized area contains a city (or twin cities) of 50,000 or more (central city) plus the surrounding closely settled incorporated and unincorporated area which meet certain criteria of population size or density.

VEHICLE UTILIZATION - Represents the number of persons being carried in contrast to the number of persons that could be carried, and is typically expressed as a percentage. Is one of the most useful measures of efficiency of a system.

Expressed as: $\frac{\text{Persons Being Carried}}{\text{Number of Persons Which Could Be Carried}}$

ZONE - A subdivision of the study or survey area which is useful in analysis or data collection. Zones may be sequenced or unsequenced. See destination, origin, forecast zone, sequence zone, survey zone, and centroid.

SPECIALIZED TRANSPORTATION PLANNING TERMS

CALL-A-BUS - Name of demand responsive transportation service in Ft. Walton Beach, Florida (now defunct).

C.A.R.S. - Acronym for Computer-Aided Routing System. Used by MIT Urban Systems Laboratory to designate its project on demand responsive transportation.

COMPUTER AIDED SERVICE - A demand responsive transportation service in which some, but not all, control center functions are performed by a computer.

D.A.B. - Acronym for Dial-a-Bus; popular name for demand responsive transportation service.

D.A.R.T. - Acronym for 1) Dial-a-Ride Transit, name of demand responsive transportation service in Stratford, Ontario; 2) Demand Activated Road Transit, name used by the Institute of Public Administration; 3) Dynamically Activated Road Transit, name of Michigan Department of Transportation demand responsive transportation services.

DEMAND DENSITY - This is a measure of demand used in planning for demand-responsive transportation. Demand density is usually defined as the number of demands per square mile.

DIAL-A-BUS - Popular name for demand responsive transportation service. Used in Batavia, New York; Bensenville, Illinois; Los Angeles, California, and other communities.

DIAL-A-RIDE - Name most commonly used for demand responsive transportation services, e.g., Haddonfield, New Jersey; Mansfield, Ohio.

DIAL-A-TRIP - Name of demand responsive transportation service provided by Dallas Transit System.

DISABLED PERSON - A disabled person is an individual who is unable to meet an environmental performance expectation because of some functional limitation. Income can create or remove a disability; dependence on public transportation by a disabled person with a low income who cannot afford any other alternative clearly results in a disability. See Disability.

D-J - Demand-jitney; name used by General Motors Lab to denote demand responsive transportation service.

DRUBS - Demand Routed Urban Bus Service; name of demand responsive transportation service under Kent State University Demonstration Project.

ELDERLY - The elderly are generally defined as those persons of 60 years or older; however, among the many federal statutes (and supporting regulations) which are concerned with the needs of the elderly, there are variations in the age specified for eligibility ranging from no specific age designated to age 65 and older: Older Americans Act, Title III - no age-related eligibility requirements, Older Americans Act, Title VII - eligibility requires 60 or over, Older Americans Act, Title IX - eligibility specified as 55 or over, etc.

FLEXICAB - Generic term for variety of innovative taxi/jitney services representing extensions or modifications of conventional taxi service.

GAP ANALYSIS - Gap analysis refers to the difference between the number of trips now being taken by a group of people and the number of trips that they should be taking. The problem of how to determine the number of trips that should be taken has not been solved despite a number of attempts.

HANDICAP - Handicapped persons are those who, "by reason of illness, injury, age, congenital malfunction, or other permanent or temporary incapacity or disability, are unable without special facilities or special planning or design to utilize mass transportation facilities and services as effectively as persons who are not so affected." Practically speaking, handicapped persons are those who cannot perform one or more of the following functions: 1) negotiate a flight of stairs, escalator, or ramp, 2) board or alight from a public transit vehicle, 3) stand in a moving public transit vehicle, 4) read informational signs, 5) hear verbal transit announcements, 6) walk more than 200 feet, 7) use public transportation without the aid of another person.

JITNEY - 1) A transportation service characterized by a fixed route and picking up and discharging passengers upon demand for a low fare. 2) A small passenger bus or an enlarged automobile or limousine, usually carrying 8 - 12 passengers.

JITNEY SERVICE OR SYSTEM - 1) See Dial-a-Ride. 2) Term also used for fixed route system in Major Activity Center using a jitney as a vehicle.

LEVEL OF SERVICE - A quantitative measure of transport service. For demand responsive transportation, expressed as a ratio of total travel time (including waiting) for demand responsive transportation to auto.

MANUAL SERVICE - A demand responsive transportation service that operates without the assistance of automatic data processing equipment in the control center.

MINIBUS - A small bus vehicle seating under 20 passengers, designed mainly for use in residential areas.

PARATRANSIT - Paratransit is defined as those forms of intra-urban passenger transportation which are available to the public, are distinct from conventional transit (scheduled bus and rail), and can operate over the highway and street system. Types of paratransit include dial-a-ride, shared taxicab service, jitneys, subscription bus, carpools, vanpools, and short-term carpools, either company owned or rental, each of which has characteristics suitable for different types of urban travel.

SPECIAL (OR SPECIALIZED) TRANSPORTATION SERVICE - This term refers to a transportation service usually provided for or paid for by a social service agency for transportation for disadvantaged people.

TRANSPORTATION DISADVANTAGED - Are those who for reasons of age, disability, or income lack accessibility to that group of goods and services deemed necessary for at least a minimum standard of living. The transportation disadvantaged include: A) the elderly and the handicapped who are unable to operate their own transportation system due to steps being too high, etc., B) the handicapped who are wheelchair users, and C) the low income, including A and B above, the housewife without a car, etc. See Transportation Handicapped.

TRANSPORTATION HANDICAPPED - Section 16(c) of the Urban Mass Transportation Act of 1964 defines a transportation handicapped person as "any individual who, by reason of illness, injury, age, congenital malfunction, or other permanent or temporary incapacity or disability, including those who are non-ambulatory wheelchair bound and those with semi-ambulatory capabilities, is unable without special facilities or special planning or design, to utilize mass transportation facilities and services as effectively as persons who are not so affected." (Federal Register, February 26, 1975, Part II, page 8317.) See Transportation Disadvantaged.

VEHICLE DENSITY - The number of vehicles per unit area. The quotient of vehicle fleet and service area. Typically, vehicles per square mile (square kilometer).

OPERATING, MANAGEMENT, AND ECONOMIC TERMS

AVERAGE RIDERSHIP - The average number of passengers which will ride a one-way trip during a determined unit of time.

AUTOMATIC VEHICLE MONITORING (AVM) - Process of collecting information on vehicle location via electronic communication.

AUTOMATIC INTERFACING - Process of conveying customer requests for demand responsive transportation service to control center via digital communication in lieu of voice communications.

AVAILABILITY OF SERVICE - For fixed-route systems, this factor can be expressed as frequency (the number of times per day or per week that a particular route is served); for demand-responsive systems, it is the reservation time (the number of hours or days between a call for a ride and the pick-up). See Fixed-Route and Demand-Responsive.

BASE-FLEET - Base-fleet is used to describe the transit fleet which operates off-peak.

CALL AND DEMAND - A system which picks up only those persons who call in advance requesting service; similar to the operations usually run by a taxi company with the amount of time between the call and the provision of service to be specified by persons managing the system.

CAPACITY - As used in transit, capacity is the total number of passengers which can be carried by a vehicle or a fleet.

CAPITAL EQUIPMENT - The various pieces of equipment necessary for operation; radios, vehicles, computers, etc. See Hardware.

COST-BENEFIT ANALYSIS (C-B) - Cost-benefit analysis is an in-depth study of expected costs or expenditures and benefits or receipts that may be incurred from a particular project. A cost-benefit study puts a dollar value on all anticipated expenditures and receipts whether they are quantifiable or qualitative. The end result of a C-B study is a dollar amount which can be used to compare with C-B studies of other alternatives.

DAILY DEMAND - The total number of requests for service per day.

DEADHEAD MILES - Mileage driven when no passenger or package service can be provided. For demand-responsive systems, this is the total of all mileage at times when no passenger or package is on the vehicle. For fixed-route systems, it is the mileage between the vehicle storage location and the start of the route (and vice versa at the end of the day). It does not cover mileage on the route.

DEMAND RESPONSIVE TRANSPORTATION (DRT) - Generic term for range of public transportation services characterized by the flexible routing and scheduling of relatively small vehicles to provide shared-occupancy, door-to-door personalized transportation on demand for a modest fare. Demand responsive service is the opposite of fixed-route, fixed-schedule transportation in which vehicles run fixed routes and schedules. See Fixed-Route.

DIMINISHING RETURNS, LAW OF - Also called "Law of Diminishing Marginal Productivity;" the proposition that when successive units of one or more variable factors are applied to a fixed factor in production, output will show three stages: 1) increase at an increasing rate, 2) increase at a decreasing rate of increase, and 3) reach a maximum and thereafter decrease.

DISPATCH - Function of relaying service instructions to drivers. May include vehicle scheduling, routing and monitoring. Dispatching can be manual, or partly or fully automated.

DOOR-TO-DOOR SERVICE (DDS) - Door-to-door service refers to a demand-responsive transportation system in which the passenger is picked up at his or her door and delivered to the door of the destination.

DOWNTIME - The total time when a piece of equipment is not available for use during normal operating hours because it is out of service for needed repairs.

DYNAMIC ROUTING - Process of constantly modifying vehicle routes to accommodate service requests received since vehicle commenced operations, as opposed to predetermined route assigned to vehicle.

ECONOMY OF SCALE - The reduction in average unit cost associated with the increase in the size of plant or activity up to a point and thereafter an increase in such cost.

EXPRESS SERVICE - Service providing higher speeds with fewer stops than generally exist on other portions of the system or on the same route. Function is to traverse fairly long routes as fast as possible.

EXTRA-OFF - Patron who wishes to depart vehicle at point before or after scheduled destination.

EXTRA-ON - Patron who wishes to depart vehicle at point before or after scheduled destination.

FARE BOX - Container near driver in which money, tokens, or tickets used by passengers to pay for the ride are deposited.

FARE BOX REVENUES - In accounting, the total sum of money collected from passengers.

FEEDER SERVICE - Local transportation service which connects with another, usually express or long distance transit service. Those services which provide access to already existing public transportation systems.

FIXED COSTS - Costs which remain constant regardless of the level of activity or production. The include such items as general supervision, overhead and administration, rents, debt service, etc. If the project runs into operating problems (e.g., loss of traffic), fixed costs will continue. In many cases includes all indirect costs. See Variable Costs and Indirect Costs.

FIXED-ROUTE - Fixed-route systems operate over the same toute (with some small deviations possible) according to a pre-established schedule. The riders of such a system must schedule their activities around the times when service is being provided. This is in contrast to a demand-responsive system. See Demand-Responsive.

FLEXIBLE ROUTING - A scheduled, fixed route with the flexibility of short distance deviation to provide demand-responsive pick-up and/or delivery when requested by passengers or dispatcher. See Dynamic Routing, Point Deviation, Fixed Route, Demand Route, and Route Deviation.

FRANCHISE - A franchise is a right, granted by a state or municipality, to do business in a certain area. It may be limited in scope. For example, a company may hold a franchise to transport only handicapped riders. It may be exclusive, meaning that no one may provide similar service within the area; or it may be non-exclusive.

FREQUENCY OF SERVICE - Refers to the ratio of monthly vehicle miles to round-trip mileage in regard to some unit of time.

FUTURE AMOUNT - The sum of a series of payments or receipts at a specified future time. See Present Worth.

GATHER - Refers to demand responsive transportation service in which passengers are collected from multiple origins for transportation to a common destination such as a transit terminal, typically involving pre-scheduled or regular service; also known as many-to-one. See Many-to-One.

GOAL - A desired end state and the approach by which society intends to move toward that end state. It contains a societal value and an action to be taken with respect to that value.

HARDWARE - The various pieces of equipment necessary for operation; radios, vehicles, computers, etc. See Capital Equipment.

HEADWAY - Time interval measured front to front between two vehicles traveling in the same direction on the same route.

INDIRECT COSTS - Costs which remain constant regardless of the level of activity or production. Also called fixed costs. See Fixed Costs.

INDUCED DEMAND - Consider demand in a system over a finite period of time assuming given incomes, prices and system configurations; induced demand is a component of latent demand generated as a consequence of a given improvement in the supply system. See Latent Demand and Transportation Demand.

INTERFACE - Transfer activity and the facilities required for transfers between transportation modes, e.g., bus to rapid transit, etc.

KISS 'N RIDE - Facilities close to the transfer point at transit stops or terminals allowing the transit user to be dropped-off from and picked-up by an automobile.

LATENT DEMAND - Consider demand in a system over a finite period of time assuming given incomes, prices and system configurations; latent demand is defined as existing needs which are unsatisfied as a consequence of inadequacies in the present supply system. See Transportation Demand.

LAY OVER - Time allowed at a terminal between arrival and departure for turning vehicles, recovery of delays, and preparing for return trip.

LEVEL OF SERVICE - In transportation literature level of service is generally defined as a measure of the convenience, comfort, safety, and utility of a system or system component (vehicle, facility, etc.). A variety of measures can be used to determine a particular component's level of service. In transit, level of service measures incorporate such factors as availability, frequency, etc. Some standard is required in any measure of level of service. For example, if the private auto is used as a standard of convenience and availability, level of service for a transit operation might be calculated as:

$$\frac{\text{Travel Time by Transit}}{\text{Travel Time by Personal Auto}}$$

LINE - 1) See Route. 2) A transportation system and/or the company owning and/or operating it.

LINEAR NETWORK - A single transit line or set of lines, basically straight, which from no particular pattern.

LINE CAPACITY - The hourly volume that could be carried if every vehicle operated at the minimum headway which the control system permits.

LINE-HAUL - Line-haul refers to public transportation that runs a direct route between two points. This is opposed to collection/distribution systems.

LINE-HAUL SERVICE - Shuttle operations along a single corridor or variety of corridors.

LINE-HAUL SYSTEM - Long stage routes, capacity above 10,000 passengers per hour past a fixed point on a single lane. Velocities about 40 km/hr (25 mph). Radial or linear configuration, on-line stations 1-5 kilometers (1/2 to 3 miles) apart, e.g., subways.

LOAD FACTOR - A measure of passenger use of a vehicle's or a system's capacity. Load factor is calculated as follows:

$$\frac{\text{Total Passenger Miles}}{\text{Seat Capacity X Vehicle Miles}}$$

Total passenger miles delivered per annum divided by seat capacity times vehicle miles traveled. See Productivity and Utilization Ratio.

LOCAL SERVICE - Service involving frequent stops and consequent low speeds. Purpose to deliver and pick up transit passengers as close to their destination and origins as possible.

LOOP - 1) Guideway configuration in the shape of an oval, circle, or other closed curve. 2) The operation of a bus route on city streets around one or more square blocks, for the purpose of turning a bus around.

MANY-TO-FEW - Many-to-few refers to demand-responsive transportation which provides service from any given point to a limited number of destinations within a specified area. FEW-TO-MANY - Few-to-many refers to demand responsive transportation which provides service from a limited number of origins to any other point within a specified area. See Many-to-Many and Demand Responsive.

MANY-TO-MANY - Many-to-many refers to demand responsive transportation which provides service from any given point to any other point within a specified service area. Routing is completely flexible, and consequently routes travelled are solely in response to the desired origins and destinations of passengers. See Many-to-Few, Few-to-Many, and Demand Responsive.

MANY-TO-ONE (MTO) - Refers to demand responsive transportation service in which passengers are collected from multiple locations (origins) within the service area, for transportation to a common destination such as a transit terminal; also called gather. See Gather.

MARGINAL COST - At any given point of production, the addition to total cost of the cost unit produced. With dollars of cost on the Y axis and quantity of output on the X axis, the marginal cost curve will be U-shaped.

MULTIPLE-STOP DISPATCHING - Driver is assigned series of stops or "tour" which must be completed before nest series is assigned.

NETWORK DESCRIPTION - The record which describes a system in terms of distance and time and operating possibilities and constraints.

NON-REVENUE HOURS - Hours which reflect time spent waiting between pickups, deadheading, and carrying out some administrative tasks.

OBJECTIVE - Describes a measurable, attainable and desired level of achievement of a goal, including the time span within which it is to be achieved. It reflects established priorities within constraints set by policy.

OFF-PEAK - Off-peak refers to those portions of a day in which demand for transportation service is comparatively low.

ONE-TO-MANY (OTM) - Reverse of many-to-one; refers to a demand-responsive transportation service in which passengers are collected from one common location for transportation to multiple destinations. See Scatter.

ONE-WAY PASSENGER TRIPS - Refers to the total number of boarding passengers carried on all routes on a given month.

ONE-WAY ROUTE MILEAGE - Refers to the sum of one-way trip lengths of all routes regardless of the number of times certain portions of streets or roads may be duplicated by other routes.

OPERATING RATIO - An operating ratio is defined as total revenues divided by expenses. Thus, operating ratio indicated the financial performance of a system.

PARK AND RIDE - A system incorporating predetermined parking areas (usually on the outskirts of a ride zone) and paid or free rides on shuttle vehicles. See Shuttle.

PASSENGER TRIPS - The number of one-way trips by persons using the system. Each passenger counts as an individual trip even if there is group boarding and alighting at common points.

PEAK HOUR - That hour period during which the maximum amount of travel occurs. Generally, there is a morning peak and an afternoon peak. Peak hour refers to that hour of the day in which a transportation system experiences its greatest demand.

PEAK DEMAND - The largest number of demands during a period. Typically one hour during the day.

POINT DEVIATION - A hybrid on the call and demand system; the vehicle travels from point to point under a pre-arranged and published schedule. The route which the vehicle takes to get from one point to the next varies according to the calls for service received. Thus, this system operates on a fixed schedule but the route is demand responsive. See Call and Demand.

POLICY - Describes a definite course selected from alternatives to guide and determine decisions on transportation matters. It prescribes the limits within which effort toward goal achievement must stay.

PRESENT DEMAND - The sum of all requests for transportation at one time.

PRESENT WORTH - The value or sum of money which at a time designated as the present is equivalent to a future series of payments or receipts at a given interest rate. See Future Amount.

PRODUCTIVITY - The basic performance parameter that describes transit and paratransit service; defined as the number of passenger trips per vehicle hour of operation. It is possible to also define productivity in terms of revenue hours once the utilization ratio is known. See Trip and Utilization Ratio.

$$\text{Productivity} = \frac{\text{Passenger Trips}}{\text{Vehicle Service Hours}}$$

RADIAL NETWORK - A set of transit lines, basically straight, which evolve essentially uniformly around an activity center.

RECOVERY TIME - Extra time scheduled at the outer terminals of a transit route to allow for rest stops and to help make up lost time.

REGENERATION - Energy recovery by returning energy to the line or by storing it through use of a flywheel or other means.

RELIABILITY - On schedule safe delivery of persons and goods.

REVENUE HOURS - Actual hours during which the vehicle is carrying passengers and earning revenue. Vehicle revenue hour are equal to the utilization factor times the vehicle service hours. See Non-Revenue Hours, Utilization Factor, and Service Hours.

RIDE QUALITY - A measure of the comfort level experienced in a moving vehicle. Partially defined by the vibration frequency, accelerations, jerk, pitch, yaw and roll.

RIDERSHIP - Number of passengers which ride in a vehicle during a one-way trip.

ROLLING COST - Usually variable costs measured with reference to time or distance. Normally includes drivers' salaries, gas, and oil. See Variable Cost.

ROLLING STOCK - Hardware used to carry passengers or packages. See Hardware.

ROUTE DEVIATION - A hybrid of the call and demand system; vehicle will deviate from a particular route to pick up or discharge a passenger at a requested location and will then go back to the regular route. Deviations are

generally small. See Call and Demand and Point Deviation.

RUN - One transit vehicle trip in one direction on a route. A round trip on one route consists of two runs.

RUNNING TIME - The scheduled elapsed time between points along a route. May vary at different times of the day due to traffic congestion.

RUSH HOUR - Refers to A.M. or P.M. peak or to both periods combined.

SATISFIED DEMAND - Consider demand in a system over a finite period of time assuming given incomes, prices and system configurations; satisfied demand can be defined as the level of usage of existing services. This level may be higher, lower or the same as existing need. If only economic factors are considered then the magnitude of safisfied demand is given by the intersection of the price line with the demand curve. See Transportation Demand.

SCATTER - Refers to the distribution of passengers to many destinations from a single origin such as a rail depot, typically involving prescheduled or regular service. Also known as one-to-many. See One-to-Many.

SCHEDULED MAINTENANCE - Vehicle inspection and repairs performed during predetermined intervals of time or milage.

SEAT MILES - The total number of seat miles for all vehicles used to provide passenger service. This is found by multiplying the number of seats on each vehicle by the number of miles driven by that vehicle and adding all of the products for each vehicle together.

SERVICE FREQUENCY - 1) Time interval between passenger vehicles moving over a route in one direction. 2) Number of vehicles moving in the same direction that pass a given point on a route within a specified interval of time.

SERVICE HOURS - Directly equal to driver payroll hours. Each driver is assumed to be capable of providing one hour of transportation service for each payroll hour. Different from "revenue hours." See Revenue Hours.

SERVICE LOOP - A system configuration in which vehicles follow a set path around a continuous loop.

SHARED-RIDE TAXI - Shared-ride taxi service is demand-responsive group riding where the riders may be traveling between different origins and destinations. A rider does not have exclusive use of the vehicle and fares are lower than conventional taxi service because of the economies associated with joint use of the vehicle. Taxi carpooling refers to a subscription type shared-ride taxi service.

SHUTTLE - A public conveyance which travels back and forth over a particular route, especially a short route or one connecting two transportation systems.

SHUTTLE SERVICE - A service operating between two Major Activity Centers as demand for rides dictates.

SHUTTLE SYSTEM - A system configuration which is characterized by point-to-point operation, usually over ashort distance. Depanding on vehicles, they may reverse direction of travel rather than turn around.

SINGLE COIN FARE - A fare established so that it may be paid by a single coin, e.g., a dime or a quarter.

SINGLE-STOP DISPATCHING - Operating procedures whereby driver receives instructions for next route segment at each assigned stop.

SUBSCRIPTION TRANSPORTATION SERVICE - Provides daily service, usually from home to work and return, or home to school and return, at a particular time for a monthly fee.

START MILES - Refers to the mileage showing in the odometer at the beginning of the daily run when the vehicle left the yard or storage facility.

STOP MILES - Refers to the mileage showing in the odometer at the end of the day when the vehicle reached the storage (or yard).

SUBSCRIPTION BUS SERVICE - The service provided by advance reservations of the same trip for a long period of time (typically A.M. and P.M. work trips).

TERMINAL TIME - That time required to unpark and to park, and additional walking time required to complete the trip exclusive of the actual time.

TICKETS - Printed paper receipts entitling a passenger to a ride or a series of rides. See Token.

TOKEN - A non-commercial coin issued by the transit company to be used by passengers for payment for a ride.

TOUR - The route plan and schedule for a vehicle to follow in serving a specified set of passenger requests.

TRAFFIC GENERATOR - A location in the service area that has a high concentration of patrons for a transportation service.

TRANSPORTATION DEMAND - May be defined as "the schedule of quantities of transportation which would be consumed given different supply frameworks." From the traditional economic point of view, the amount of transportation supplied should equal the demand for this service at the price at which it is offered. Unlike need, demand is established with reference to

economic considerations such as the price of the transportation service and the financial resources of the consumer.

TRANSPORTATION NEED - Can be defined as the minimum amount of transportation required for an individual to access that package of goods and services deemed by contemporary standards to be essential for at least minimum levels of living.

TRANSPORTATION SYSTEMS MANAGEMENT (TSM) ELEMENT - Transportation Systems Management refers to the aspect of transportation system design that is essentially operational in nature. Included in TSM would be the introduction of exclusive bus lanes, parking management, carpooling, retiming traffic signals, etc.

TRAVEL DEMAND - As a concept refers to no unique quantity of travel, but rather refers to a functional market behavioral relation between quantities of travel that will be demanded, given levels of the determinants of demand. It is often used to refer to the level of demand, i.e., quantity of trips which will be taken for specific purposes under a given supply system. Travel demand is reflected in market behavior as related to consumer wants, prices of transportation services, prices of other goods, and financial resources. Demand is usually expressed as what the consumer wants and buys in contrast to need, which is expressed as an ideal determined by experts.

TRAVELTIME - The time required to travel between two points, not including terminal time.

TRIP DISTANCE - The distance between origin and destination.

TRIP PURPOSE - The reason for making the trip. Normally, one of ten possible purposes, such as, work, shopping, recreation, medical care, etc. Each trip may have a purpose at each end. For example, home to work.

TURN-AROUND-TIME - Period of time required to perform scheduled maintenance. Also time elapsed from removal of vehicle from operation to return of vehicle to operational status.

UNIT COST - Periodic total costs divided by units of output (goods or services). For example, the ratio of fixed and variable costs of a system to the number of one-way passenger trips yields a unit cost expressed as cost/passenger trip. See Measures of Operating Costs.

UNSCHEDULED MAINTENANCE - Vehicle repairs performed at other than predetermined intervals. See Scheduled Maintenance.

UTILIZATION FACTOR - The utilization factor is the vehicle revenue hours divided by the vehicle service hours. See Revenue Hours and Service Hours.

UTILIZATION RATIO - A measure of a vehicle's or a system's productivity or use of capacity. The utilization ratio is calculated as follows:

$$\text{Vehicle Utilization Ratio} = \frac{\text{Total Revenue Hours}}{\text{Total Service Hours}} \quad \text{where}$$

Total Revenue Hours = Total hours of vehicle operation with passengers, and

Total Service Hours = Total driver payroll hours

The utilization ratio relates the actual hours billed for service to the total number of hours of vehicle service availability (measured by driver payroll hours). See Revenue Hours and Service Hours.

VARIABLE COSTS - Costs which are generally proportional to the level of activity or production. Sometimes called "direct" costs. They are usually affecte by the vehicle miles, passenger trips, or some other measure of level of service. Variable costs typically include such items as fuel, oil, tires, and tubes, drivers' wages and other items of expense that are sensitive to the level of operation. Vehicles and equipment items purchased have life expectancies which require that a depreciation factor be included when figuring costs. Most typically, depreciation is figured on a five-year straight-line basis with a ten percent residual salvage value at the end of that time. See Fixed Costs.

VEHICLE FLEET - The number of vehicles dedicated to transportation service in one service area.

VEHICLE HOUR - Either the time the engine is running, or the time a driver is assigned to it; the operating time for a vehicle. Useful in measuring operating costs.

VEHICLE MILES - The total number of miles driven on all vehicles used to provide passenger service.

ADMINISTRATIVE AND FISCAL TERMS

ALLOCATION - An Administrative distribution of funds among the States. This is done for funds which do not have legislatively mandated distribution formulas.

AGGLOMERATION - Agglomeration in economics refers to the tendency for economic activities to group together. When several activities that sell products to one another locate in proximity, some transportation costs may be substantially reduced. Also, when several similar types of activities locate near to each other the prospective consumers for their products will be drawn to the area, not necessarily to one individual activity.

APPORTIONMENT - A term having two meanings: one legislative, the other administrative, and which refers to a division or assignment of funds. The legislative apportionment is based on prescribed formulas and consists of dividing authorized obligational authority for a specific program among the States. The Administrative apportionment is performed by the Office of Management and Budget and involved limitations on obligations incurred within a given fiscal year or time period thereof.

APPROPRIATION - An act of a legislative body which makes funds available for expenditure with specific limitations as to amount, purpose, and duration. In most cases, an appropriation act permits money previously authorized by substantive legislation to be obligated and payments to be made. In the highway program, appropriations specify the amounts of funds which Congress will make available to liquidate prior obligations; that is, the sum of all payments of vouchers to be submitted during a given fiscal year. The highway appropriations permit the repayment of obligations incurred in previous years.

AUTHORIZATION - Basic substantive legislation which empowers an agency to implement a particular program and which also, in many cases, establishes an upper limit on the amount of funds which can be appropriated for that program.

AVAILABILITY - Authorizations that are apportioned shall be available for a period of two years after the end of the fiscal year for which authorized.

BUDGET AUTHORITY - Empowerment by the Congress which allows Federal agencies to incur obligations to spend or lend money. This empowerment is generally in the form of appropriations. However, in the highway program it is in the form of "contract authority." Budget authority permits agencies to obligate all or part of the funds which were previously "authorized." Without budget authority, Federal agencies cannot commit the Government to make expenditures or loans.

CONTRACT AUTHORITY - A form of budget authority which permits obligations to be made for the full amount of the authorization The Federal-Aid highway program utilized contract authority.

EXPENDITURES (OUTLAYS) - A term signifying disbursement of funds for repayment of obligations incurred. A check sent to a State highway department for voucher payment is an expenditure or outlay.

FINANCIAL AGREEMENTS - A formal contract stipulating the participation two or more agencies will play in carrying out a planning or implementation program.

FISCAL YEAR - The time period beginning July 1 and ending June 30 of the subsequent calendar year. Fiscal years are designated by the calendar year in which they end.

TRUST FUNDS - Are established by law to account for receipts which are held by the Government and earmarked for specific purposes and programs. These receipts are not available for the general purposes of the Government. The Highway Trust Funds is comprised of receipts from certain highway user taxes (e.g., excise taxes on gasoline, rubber, and heavy vehicles) and reserved for use for gighway construction and related purposes.

OUTLAY - See Expenditure.

OBLIGATIONS - Commitments made by Federal agencies to pay out money, as distinct from the actual payments, which are "outlays." Generally, obligations are incurred after the enactment of budget authority. However, since budget authority in the highway program is in the form of contract authority, obligations are permitted to be incurred immediately after approtionment. The obligations are for the Federal share of the full cost of each project at the time it is started, regardless of when the obligations are expected to be incurred or the expected time of project completion.

FEDERAL REGIONAL COUNCIL - Created by executive order of the President in each Standard Federal Region in which 10 Federal agencies are represented to provide a forum for consideration and evaluation of problems impacting on Federal programs.

TRANSIT UNIONS - The three large national transit unions are: Amalgamated Transit Union, Hdqtrs. Washington, D.C.; Transport Workers of America, Hdqtrs. New York, N.Y.; United Transport Service Employees, Hdqtrs. Chicago, Illinois.

ALPHABET SOUP

A-95 REVIEW - See Glossary, A-95. Circular No. A-95 of the Office of Management and Budget.

ACTION - Is a volunteer support agency for the Federal Government, established in 1971 by the Office of the President of the United States. ACTION administers programs such as: VISTA, Peace Corps, Foster Grandparents, Retired Senior Volunteer Program (RSVP), Senior Companion Program, University Year for ACTION, etc.

ADT - Average Daily Traffic; see Glossary.

AORTA - Appalachian Ohio Regional Transit Association; a private, nonprofit regional transit association, originating under Ohio's Tri-County Rural Transportation Project.

APA - Assistance Payments Administration (HEW).

AVM - Automatic Vehicle Monitoring. See Glossary.

CAA - Community Action Agency.

CAP - Community Action Program.

C.A.R.S. - Computer-Aided Routing System; see Glossary.

CATS - Council for Advanced Transportation Studies.

C-B - Cost-Benefit Analysis. See Glossary.

CBD - Central Business District; see Glossary.

CSA - Community Services Administration; formerly OEO (Office of Economic Opportunity).

D.A.B. - Dial-a-Bus; see Glossary.

D.A.R.T. - Dial-a-Ride Transit, Demand Activated Road Transit, Dynamically Activated Road Transit; see Glossary.

DDS - Door-to-Door Service; see Glossary.

D-J - Demand-jitney; see Glossary.

DOL - U.S. Department of Labor.

DOT - U.S. Department of Transportation.

DPW - Department of Public Welfare.

DRT - Demand-responsive transportation; see Glossary.

DRUBS - Demand Routed Urban Bus Service; see Glossary.

EIS - Environmental Impact Statement; see Glossary.

EMS - Emergency Medical Services.

EPA - Environmental Protection Agency.

FAA - Federal Aviation Administration.

FHWA - Federal Highway Administration.

FRA - Federal Railroad Administration.

FTM - Few-to-Many; see Glossary.

GSA - Government Services Administration.

HEW - Department of Health, Education, and Welfare.

HPR - Highway Planning and Research; see Glossary, HPR Funds.

HUD - U.S. Department of Housing and Urban Development.

IPA - Institute of Public Administration, Washington, D.C.

IPG - Intermodal Planning Groups; see Glossary.

LRT - Light Rapid (Rail) Transit.

MAC - Major Activity Center; see Glossary.

MPO - Metropolitan Planning Organization; see Glossary.

MTF - Many-to-Few; see Glossary.

MTM - Many-to-Many; see Glossary.

MTO - Many-to-One; see Glossary.

NHTSA - National Highway Traffic Safety Administration.

OHD - Office of Human Development (HEW).

OMB - Office of Management and Budget.

OPD - Overall Program Design; see Glossary.

OST - Office of the Secretary of Transportation.

OTM - One-to-Many; see Glossary.

"PERT" - Personal Transit Dial-a-Bus System.

P.M. PEAK - Period in the afternoon when demand for transportation service or facilities is heaviest, usually 1 1/2 to 2 hours.

PMT - People Mover Transit. Low capacity, low speed system used as an auxiliary collection and distribution system for Major Activity Center.

PRT - Personal Rapid Transit.

PSA - Public Service Administration (HEW).

PT - Para-Transit.

PUC - Public Utility Commission.

R & D - Research, Development, and Demonstrations Program; see Glossary.

RDS - Rural Development Service.

ROW - Right-of-Way.

SMSA - Standard Metropolitan Statistical Area; see Glossary.

TDP - Transit Development Program; see Glossary.

TIP - Transportation Improvement Program.

TRB - Transportation Research Board. Prior to 1974 was the Highway Research Board.

TRIP - Transportation Renumeration and Incentive Program, West Virginia; "...TRIP is a unique demonstration project which is attempting to forge a network of linkages to independent transit providers by subsidizing the fares of low-income elderly and handicapped riders."

TSM - Transportation Systems Management Element; see Glossary.

UMTA - Urban Mass Transportation Administration.

USDA - U.S. Department of Agriculture.

USOE - U.S. Office of Education.

UWP - Unified Work Program; see Glossary.

VTD - Valley Transit District, Naugatuck Valley, Conneticut; provides "...a coordinated system serving the needs of clients of the social service agencies of the project area."

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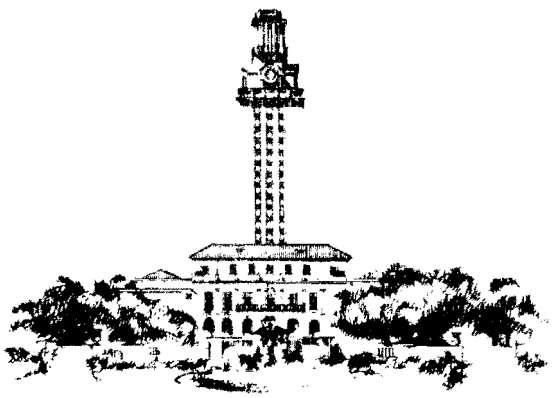

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